

RECEIVED
MAR 19 2003
TECH CENTER 1600/2900



ENTERED

1600

#19

RAW SEQUENCE LISTING

DATE: 03/13/2003

PATENT APPLICATION: US/09/888,721B

TIME: 13:53:58

Input Set : A:\Revised Sequence Listing.txt.Page Numbered.2.txt

Output Set: N:\CRF4\03132003\I888721B.raw

7 <110> APPLICANT: Huston, James S.
8 Wils, Pierre
9 Zhu, Quan
10 Laurent, Olivier
12 Marasco, Wayne A.
15 Scherman, Daniel
21 <120> TITLE OF INVENTION: BIOENGINEERED VEHICLES FOR TARGETED NUCLEIC ACID
24 DELIVERY
30 <130> FILE REFERENCE: 23611-A USA
C--> 36 <140> CURRENT APPLICATION NUMBER: US/09/888,721B
39 <141> CURRENT FILING DATE: 2001-06-25
45 <150> PRIOR APPLICATION NUMBER: 60/213,653
48 <151> PRIOR FILING DATE: 2000-06-23
54 <160> NUMBER OF SEQ ID NOS: 53
60 <170> SOFTWARE: PatentIn Ver. 3.1
66 <210> SEQ ID NO: 1
69 <211> LENGTH: 18
72 <212> TYPE: PRT
75 <213> ORGANISM: Homo sapiens
81 <400> SEQUENCE: 1
84 Ser Arg Ser Arg Tyr Tyr Arg Gln Arg Gln Arg Ser Arg Arg Arg Arg
87 1 5 10 15
93 Arg Arg
105 <210> SEQ ID NO: 2
108 <211> LENGTH: 26
111 <212> TYPE: PRT
114 <213> ORGANISM: Homo sapiens
120 <400> SEQUENCE: 2
123 Ala Lys Lys Ala Lys Ser Pro Lys Lys Ala Lys Ala Ala Lys Pro Lys
126 1 5 10 15
132 Lys Ala Pro Lys Ser Pro Ala Lys Ala Lys
135 20 25
144 <210> SEQ ID NO: 3
147 <211> LENGTH: 10
150 <212> TYPE: PRT
153 <213> ORGANISM: Adenovirus
159 <400> SEQUENCE: 3
162 Ser Gly Pro Ser Asn Thr Pro Pro Glu Ile
165 1 5 10
174 <210> SEQ ID NO: 4
177 <211> LENGTH: 9
180 <212> TYPE: PRT
183 <213> ORGANISM: Human papillomavirus

RAW SEQUENCE LISTING

DATE: 03/13/2003

PATENT APPLICATION: US/09/888,721B

TIME: 13:53:58

Input Set : A:\Revised Sequence Listing.txt.Page Numbered.2.txt

Output Set: N:\CRF4\03132003\I888721B.raw

```

189 <400> SEQUENCE: 4
192 Arg Ala His Tyr Asn Ile Val Thr Phe
195   1           5
204 <210> SEQ ID NO: 5
207 <211> LENGTH: 10
210 <212> TYPE: PRT
213 <213> ORGANISM: Human papillomavirus
219 <400> SEQUENCE: 5
222 Thr Asp Leu Tyr Cys Tyr Glu Gln Leu Asn
225   1           5           10
234 <210> SEQ ID NO: 6
237 <211> LENGTH: 10
240 <212> TYPE: PRT
243 <213> ORGANISM: Human papillomavirus
249 <400> SEQUENCE: 6
252 Ala Glu Pro Asp Arg Ala His Tyr Asn Ile
255   1           5           10
264 <210> SEQ ID NO: 7
267 <211> LENGTH: 19
270 <212> TYPE: PRT
273 <213> ORGANISM: Human papillomavirus
279 <400> SEQUENCE: 7
282 Lys Cys Asp Ser Thr Leu Arg Leu Cys Val Gln Ser Thr His Val Ile
285   1           5           10           15
291 Arg Thr Leu
303 <210> SEQ ID NO: 8
306 <211> LENGTH: 10
309 <212> TYPE: PRT
312 <213> ORGANISM: Human papillomavirus
318 <400> SEQUENCE: 8
321 Gly Thr Leu Gly Ile Val Cys Pro Ile Cys
324   1           5           10
333 <210> SEQ ID NO: 9
336 <211> LENGTH: 10
339 <212> TYPE: PRT
342 <213> ORGANISM: Epstein-Barr Virus
348 <400> SEQUENCE: 9
351 Asp Thr Pro Leu Ile Pro Leu Thr Ile Phe
354   1           5           10
363 <210> SEQ ID NO: 10
366 <211> LENGTH: 15
369 <212> TYPE: PRT
372 <213> ORGANISM: Epstein-Barr Virus
378 <400> SEQUENCE: 10
381 Pro Arg Ser Pro Thr Val Phe Tyr Asn Ile Pro Pro Met Pro Leu
384   1           5           10           15
393 <210> SEQ ID NO: 11
396 <211> LENGTH: 9
399 <212> TYPE: PRT

```

RAW SEQUENCE LISTING

DATE: 03/13/2003

PATENT APPLICATION: US/09/888,721B

TIME: 13:53:58

Input Set : A:\Revised Sequence Listing.txt.Page Numbered.2.txt

Output Set: N:\CRF4\03132003\I888721B.raw

```

402 <213> ORGANISM: Epstein-Barr Virus
408 <400> SEQUENCE: 11
411 Phe Leu Arg Gly Arg Ala Tyr Gly Leu
414   1           5
423 <210> SEQ ID NO: 12
426 <211> LENGTH: 15
429 <212> TYPE: PRT
432 <213> ORGANISM: Epstein-Barr Virus
438 <400> SEQUENCE: 12
441 Arg Gly Ile Lys Glu His Val Ile Gln Asn Ala Phe Arg Lys Ala
444   1           5           10           15
453 <210> SEQ ID NO: 13
456 <211> LENGTH: 10
459 <212> TYPE: PRT
462 <213> ORGANISM: Epstein-Barr Virus
468 <400> SEQUENCE: 13
471 Glu Glu Asn Leu Leu Asp Phe Val Arg Phe
474   1           5           10
483 <210> SEQ ID NO: 14
486 <211> LENGTH: 9
489 <212> TYPE: PRT
492 <213> ORGANISM: Epstein-Barr Virus
498 <400> SEQUENCE: 14
501 Ile Val Thr Asp Phe Ser Val Ile Lys
504   1           5
513 <210> SEQ ID NO: 15
516 <211> LENGTH: 9
519 <212> TYPE: PRT
522 <213> ORGANISM: Homo sapiens
528 <400> SEQUENCE: 15
531 Leu Leu Gly Arg Asn Ser Pro Glu Val
534   1           5
543 <210> SEQ ID NO: 16
546 <211> LENGTH: 13
549 <212> TYPE: PRT
552 <213> ORGANISM: Murine sarcoma virus
558 <400> SEQUENCE: 16
561 Lys Leu Val Val Val Gly Ala Arg Gly Val Gly Lys Ser
564   1           5           10
573 <210> SEQ ID NO: 17
576 <211> LENGTH: 12
579 <212> TYPE: PRT
582 <213> ORGANISM: Homo sapiens
588 <400> SEQUENCE: 17
591 Lys Leu Val Val Val Gly Ala Val Gly Val Gly Lys
594   1           5           10
603 <210> SEQ ID NO: 18
606 <211> LENGTH: 16
609 <212> TYPE: PRT

```

RAW SEQUENCE LISTING

DATE: 03/13/2003

PATENT APPLICATION: US/09/888,721B

TIME: 13:53:58

Input Set : A:\Revised Sequence Listing.txt.Page Numbered.2.txt

Output Set: N:\CRF4\03132003\I888721B.raw

```

612 <213> ORGANISM: Homo sapiens
618 <400> SEQUENCE: 18
621 Asp Ile Leu Asp Thr Ala Gly Leu Glu Glu Tyr Ser Ala Met Arg Asp
624   1           5           10           15
633 <210> SEQ ID NO: 19
636 <211> LENGTH: 8
639 <212> TYPE: PRT
642 <213> ORGANISM: Homo sapiens
648 <400> SEQUENCE: 19
651 Gly Leu Glu Glu Tyr Ser Ala Met
654   1           5
663 <210> SEQ ID NO: 20
666 <211> LENGTH: 10
669 <212> TYPE: PRT
672 <213> ORGANISM: Homo sapiens
678 <400> SEQUENCE: 20
681 Glu Leu Val Ser Glu Phe Ser Arg Met Ala
684   1           5           10
693 <210> SEQ ID NO: 21
696 <211> LENGTH: 15
699 <212> TYPE: PRT
702 <213> ORGANISM: Homo sapiens
708 <400> SEQUENCE: 21
711 His Leu Asp Met Leu Arg His Leu Tyr Gln Gly Cys Gln Val Val
714   1           5           10           15
723 <210> SEQ ID NO: 22
726 <211> LENGTH: 15
729 <212> TYPE: PRT
732 <213> ORGANISM: Homo sapiens
738 <400> SEQUENCE: 22
741 Ser Arg Leu Leu Gly Ile Cys Leu Thr Ser Thr Val Gln Leu Val
744   1           5           10           15
753 <210> SEQ ID NO: 23
756 <211> LENGTH: 9
759 <212> TYPE: PRT
762 <213> ORGANISM: Homo sapiens
768 <400> SEQUENCE: 23
771 Glu Ala Asp Pro Thr Gly His Ser Tyr
774   1           5
783 <210> SEQ ID NO: 24
786 <211> LENGTH: 10
789 <212> TYPE: PRT
792 <213> ORGANISM: Homo sapiens
798 <400> SEQUENCE: 24
801 Leu Leu Asp Gly Thr Ala Thr Leu Arg Leu
804   1           5           10
813 <210> SEQ ID NO: 25
816 <211> LENGTH: 9
819 <212> TYPE: PRT

```

RAW SEQUENCE LISTING

DATE: 03/13/2003

PATENT APPLICATION: US/09/888,721B

TIME: 13:53:58

Input Set : A:\Revised Sequence Listing.txt.Page Numbered.2.txt

Output Set: N:\CRF4\03132003\I888721B.raw

```

822 <213> ORGANISM: Homo sapiens
828 <400> SEQUENCE: 25
831 Tyr Leu Glu Pro Gly Pro Val Thr Ala
834   1           5
843 <210> SEQ ID NO: 26
846 <211> LENGTH: 9
849 <212> TYPE: PRT
852 <213> ORGANISM: Homo sapiens
858 <400> SEQUENCE: 26
861 Met Leu Leu Ala Val Leu Tyr Cys Leu
864   1           5
873 <210> SEQ ID NO: 27
876 <211> LENGTH: 9
879 <212> TYPE: PRT
882 <213> ORGANISM: Homo sapiens
888 <400> SEQUENCE: 27
891 Tyr Met Asn Gly Thr Met Ser Gln Val
894   1           5
903 <210> SEQ ID NO: 28
906 <211> LENGTH: 9
909 <212> TYPE: PRT
912 <213> ORGANISM: Homo sapiens
918 <400> SEQUENCE: 28
921 Tyr Met Asn Gly Thr Met Ser Glu Val
924   1           5
933 <210> SEQ ID NO: 29
936 <211> LENGTH: 21
939 <212> TYPE: PRT
942 <213> ORGANISM: Homo sapiens
948 <400> SEQUENCE: 29
951 Ala Ala Gly Ile Gly Ile Leu Thr Val Ile Leu Gly Val Leu Leu Leu
954   1           5           10           15
960 Ile Gly Cys Trp Tyr
963           20
972 <210> SEQ ID NO: 30
975 <211> LENGTH: 9
978 <212> TYPE: PRT
981 <213> ORGANISM: Simian virus 40
987 <400> SEQUENCE: 30
990 Thr Pro Pro Lys Lys Lys Arg Lys Val
993   1           5
1002 <210> SEQ ID NO: 31
1005 <211> LENGTH: 14
1008 <212> TYPE: PRT
1011 <213> ORGANISM: Homo sapiens
1017 <400> SEQUENCE: 31
1020 Lys Lys Ser Ala Lys Lys Thr Pro Lys Lys Ala Lys Lys Pro
1023   1           5           10
1032 <210> SEQ ID NO: 32

```

VERIFICATION SUMMARY

DATE: 03/13/2003

PATENT APPLICATION: US/09/888,721B

TIME: 13:53:59

Input Set : A:\Revised Sequence Listing.txt.Page Numbered.2.txt

Output Set: N:\CRF4\03132003\I888721B.raw

L:36 M:270 C: Current Application Number differs, Replaced Current Application Number